

| NAME P/N QTY | CRIT | FAILURE MODE & CAUSES | FAILURE EFFECT | RATIONALE FOR ACCEPTANCE |
|---|------|---|--|--|
| BODY SEAL CLOSURE (HUT HALF), ITEM 102 ----- A/L 9786-06 (1) | 2/2 | 102FM19 Fails to engage, mini work station. Contamination or foreign matter in mounting boss. Damaged locking pin/insert. | END ITEM: MWS locking pin will not lock in locking pin insert. GFE INTERFACE: Unable to clamp MWS to HUT. MISSION: Loss of use of MWS. Terminate EVA. CREW/VEHICLE: None. TIME TO EFFECT /ACTIONS: Seconds. TIME AVAILABLE: N/A TIME REQUIRED: N/A REDUNDANCY SCREENS: A-N/A B-N/A C-N/A | A. Design - The HUT side Body Seal Closure (BSC) has two bosses designed to interface with the mini work station (MWS). Each boss houses a locking pin anchor insert that provides the mating sockets for the MWS. This insert is machined from 17-4 ph stainless steel heat treated to a 1050 condition. Surface finish on the insert is 63. The insert has a conically shaped bore that is widest at the opening and tapers back toward the suit. The conical shape of insert coupled with its smooth finish makes it unlikely that contamination or foreign matter could remain in the insert to cause a failure to engage. In addition, a passageway to ambient is located at the bottom of the sockets. Any contaminants or foreign matter, if it did lie in the insert, could be pushed out when mating the projection of the MWS. The very high strength of the insert and its sheltered position within the BSC precludes damage that would cause a failure to engage. B. Test - Acceptance: Component - See Inspection. Certification: The MWS was installed in the BSC and successfully side loaded to 100 lbs. Ref. ILC TPS CT-014, 5/80. C. Inspection - Components and material manufactured to ILC requirements at an approved supplier are documented from procurement through shipping by the supplier. Visual inspection is performed per Airlock ATP 9786 prior to acceptance by ILC. ILC incoming receiving inspection verifies that no damage certifications have been received which provides traceability information. MIP's are performed for viusal inspection to assure that the BSC is installed correctly. D. Failure History - None. E. Ground Turnaround - Inspected for non-EET processing per FEMU-R-001, mini workstation fit check. None for EET processing. F. Operational Use - 1. Crew Response PreEVA: Troubleshoot problem, if no success, terminate EVA prep. Consider EMU 3 if available. EMU no go for EVA. EVA: Troubleshoot problem, if no success continue EVA without MWS using wrist/waist tethers as backup. 2. Special Training No training specifically covers this failure mode. 3. Operational Considerations Not applicable. |

EXTRAVEHICULAR MOBILITY UNIT
SYSTEMS SAFETY REVIEW PANEL REVIEW
FOR THE
I-102 HARD UPPER TORSO (HUT)
CRITICAL ITEM LIST (CIL)
EMU CONTRACT NO. NAS 9-97150

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